DOCUMENT RESUME

ED 368 107

EC 302 861

AUTHOR

Fahs, Mary Ellen; And Others

TITLE

Comprehensive Early Intervention Program for

High-Risk Infants, Toddlers and Their Families:

Research Implications.

PUB DATE

4 Dec 93

NOTE

28p.; Paper presented at the Zero to Three Biennial National Training Institute (8th, Washington, DC, December 2-5, 1993). The Taconic Foundation provided

support for this research.

PUB TYPE

Speeches/Conference Papers (150) -- Reports -

Research/Technical (143)

EDRS PRICE

MF01/PC02 Plus Postage.

DESCRIPTORS

*At Risk Persons; Child Development; *Cocaine; *Cognitive Development; Congenital Impairments; Crack; *Early Intervention; Family Environment; Family Programs; Infants; Neurological Impairments; Outcomes of Treatment; Parent Participation; Parents

as Teachers; Pregnancy; *Prenatal Influences; Preschool Education; *Program Effectiveness;

Toddlers

IDENTIFIERS

New York (Harlem)

ABSTRACT

The Center for Comprehensive Health Practice in the East Harlem area of New York City operates an early intervention program called the Infant School to promote the healthy development of high-risk children from birth to 2 years of age, including those of mothers who had been users of cocaine and/or crack. The Infant School curriculum is designed to help mothers learn to enhance their children's cognitive, social, and emotional development through hands-on play activities. This study sought to assess the development of 23 children and to determine the effectiveness of early intervention program participation, through analysis of demographic factors, child's birth history, home environment factors. participation in program interventions, and the Bayley Scales of Infant Development. Most of the children were developing within normal parameters, and the scores' means were above average on the Mental Development Index and the Psychomotor Development Index. There were no significant correlations between the children's mental and motor scores and their attendance in the Infant School. However, the more the family had attended the Infant School, the higher the child scored on the Infant Behavior Record, which comprised three factors: test affect/extraversion, activity level, and task orientation. Possible explanations for these findings are discussed, and clinical implications are explored. Interview and observation forms are appended. (Contains 30 references.) (JDD)



"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Mary Ellin Tahs

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) "

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

Mhis document has been reproduced as recaived from the person or organization originating it

Minor changes have been made to improve reproduction quality

 Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Comprehensive Early Intervention Program

for High-Risk Infants, Toddlers and their Families:

Research Implications

Mary Ellen Fahs, Ph.D.
Deborah Brotman, M.D.
Carla Griffith, M.P.H.
Constance Paine, M.A.
Irving Silverman, Ph.D.

The Center for Comprehensive Health Practice, Inc. 163 East 97th Street, New York, NY 10029

Paper presented at the 8th Biennial National Training Institute,
ZERO TO THREE/National Center for Clinical Infant Programs,
Washington Hilton Hotel
December 4, 1993

With appreciation and thanks to The Taconic Foundation for support of this research; to Dr. Richard Brotman, C.E.O., for invaluable suggestions regarding the research design; and to Fred Suffet, M.A., for advice and technical assistance.



There has been much sensational reporting in the public media and in professional teachers' journals about the adverse effects of crack and cocaine on the developing fetus and subsequently on the learning potential and social competence of the school-age child exposed to crack in utero (Blakeslee, 1989; Blakeslee, 1990; Chira, 1990; Bellisimo, 1990; Rist, 1990). These fears were generated by early studies indicating that some cocaine-exposed infants exhibited decreased fetal growth, birthweight and head circumference, as well as neurological and neurobiological effects (Chasnoff, 1987; Chasnoff, Burns & Burns, 1987).

More recent studies, which have assessed cocaine-exposed infants beyond the neonatal period, have revealed that many of these infants are developing within normal parameters (Chasnoff et al., 1992; Neuspiel & Hamel, 1991; Richardson & Day, 1991).

Most researchers have recognized that the consequences of poverty, including lack of prenatal care, poor nutrition, and family stress, may well outweigh the effects of exposure to cocaine in utero and have postulated the beneficial effects of early intervention (Hawley & Disney, 1992; Mayes, et al. 1992; Zuckerman & Frank, 1991).

Unfortunately, the general public and many school systems seem largely unaware of these changing opinions and still take a pessimistic view of the life chances of drug-exposed children, with some educators expressing the need for enlarged special education programs to cope with the disabilities of these children in elementary school.



For the past three years, The Center for Comprehensive Health Practice in the East Harlem area of New York City has run an early intervention program called the Infant School to promote the healthy development of high-risk children from birth to two years of age, including those of mothers who have been users of cocaine and/or crack. The Infant School curriculum is designed to help mothers learn to enhance their children's cognitive, social and emotional development through hands-on play activities. This program is an integral part of the Center's comprehensive, primary care practice which provides health care, individual counseling, group drug treatment sessions, and weekly home visits by paraprofessionals trained in child development and parenting techniques.

The aim of the present study was to make a preliminary assessment of the development of a small sample of children and to try to determine the effect on their development of participation in the early intervention program. The research design identified the children's development, as measured by The Bayley Scales of Infant Development, as the outcome or dependent variable. The independent variables were grouped in four domains: 1) demographic factors such as mother's age and education, 2) the child's birth history and neonatal condition; 3) the home environment, particularly parent-child interactions; and 4) program interventions, especially the Infant School.

The aim of this paper is to present the results of the study. Due to the small size of the sample, the findings must be viewed with some caution, yet they remain highly suggestive of future directions for helping children at risk because of poverty



and parental substance abuse.

METHOD

Subjects

The pool of subjects for this study were children and mothers enrolled in the Center's drug-free treatment program for non-opiate substance abusers. The criteria for inclusion in the study were that the mother be willing to participate, and that the children be between four and thirty months of age and have attended Infant School at least once. Sixty-five mother/child pairs met these selection criteria and were potentially available for recruitment for the study. Twenty-three could be contacted in a timely manner and agreed to take part in the study.

Measures

Dependent Variable: The Children's Development

To measure the children's development, the research team selected the widely-used <u>Bayley Scales of Infant Development</u>
(Bayley, 1969). The Mental Scale contains 163 items designed to assess early cognitive processes. Results of administration are expressed as a standard score, the Mental Development Index (MDI). The Motor Scale contains 81 items designed to provide a measure of the degree of control of the large body muscles and finer manipulation skills of the hands and fingers. Results of administration are expressed in a standard score, the Psychomotor Development Index (PDI).

Contrasted to the Mental and Motor Scales, the Infant Behavior Record (IBR), which constitutes the third part of the



BSID, is a tester rating scale. Children are rated at the end of the session on such behaviors as social orientation, attention span, persistence and activity level. The IBR is an important inclusion in the testing of intelligence because some experts believe that the addition of personality to ability variables can, at any age, significantly increase the percentages of explained variance in achievement (Paine, 1992). It appears that infant intelligence is as much a function of motivational and affective factors, as it is of purely cognitive elements (Roszkowski, 1989). Some researchers have found that aspects of the IBR are more predictive of later IQ than the MDI and PDI (DiLalla et al., 1990). Our factor analysis of the IBR items resulted in essentially the same three factors that were reported by Matheny (1980) and van der Meulen and Smrkovsky (1985): Test Affect/Extraversion, Activity and Task Orientation.

Test Affect/Extraversion pertained to the degree that infants were positive and involved in the social give-and-take of the test situation (Matheny, 1980). The Activity factor described the child's activity and energy level. Task Orientation pertained to goal directedness, attention span, persistence and responsiveness to test materials (See Table 1 for items associated with each factor and modifications made for this study). All five of these aspects of the BSID were used in the study analyses as subsets of the dependent variable.

Independent Variables (by domain):

1) Demographic Factors

Demographic data about the mothers participating in the



study was drawn from the family's case record.

2) Child's Birth History and Neonatal Condition

The Mother's Home Interview was designed by the research team to gain information on the subject child's birth history (gestational age, weight, etc.), care (home or foster care), and well-being during first four months, as reported by the mother (See Appendix A).

3) <u>Home Environment</u>

The research team selected the <u>HOME-Short Form</u> to standardize the observation of the parent-child interaction in the home. As described by Boehm (1985), the HOME instrument was an observational measure of the quality of the cognitive stimulation and emotional support provided the child by his or her family. The short form contained eight items; it was a modification of the considerably longer HOME Inventory (Caldwell & Bradley, 1984). It has been used extensively by The Center for Human Resource Research, at Ohio State University, Columbus, Ohio for the National Longitudinal Survey of Youth. A short checklist of toys and activities used in the Infant School was appended to this form in order to examine the influence of the school on the home environment (See Appendix B).

A second instrument used to assess the parent-child interaction was the <u>HOME Screening-Mother Supplement</u> (Baker & Mott, 1989). This measure was developed by the Center for Human Resource Research at Ohio State University to provide additional information about mothers' cognitive stimulation and emotional



support of their children by asking the mother ten questions about the items covered in the observation, e.g. books, toys, conversing, outings, spankings (See Appendix C).

4) Program Interventions:

Data on the family's use of the Center's comprehensive services, including the Infant School, were taken from the family's case records. Counts were made of the number of times each of the Center's services were used by the family from the date of in-take to the date the child was given the Bayley assessment. In addition to this quantitive data, a qualitative score was derived from the ratings of the mother's progress in the program. All study mothers, as clients at the Center, had been rated on a 5-point scale on various life dimensions (e.g., physical health, substance abuse, family relations, child care, and housing) by the interdisciplinary team as part of the family's treatment plan, with an average of these ratings constituting a global rating score. These ratings were made before any of the data gathered by the researchers had been analyzed and were independent of the researchers' work. For this study, the global rating at time of in-take (Time 1) was subtracted from the global rating at the time of the child's Bayley assessment (Time 2) to create Global Rating Improvement Score for use in the analysis.

Data Collection Procedures

One researcher visited each family's home for a one-hour administration of the interview schedule and observation. Home visits could not be arranged in three cases. The Mother's Home



Interview and HOME Screening were therefore administered to these three by the researcher in the center; the HOME observation was not performed in these cases.

All 23 families came into the center for the administration of The Bayley Scales of Infant Development by a second researcher who had not been in the home and did not know the families. The home visit and infant testing were scheduled within two to four weeks of each other. The instrument administration and child assessment took place from mid-January to June 1, 1992.

Following these procedures, the family's participation in the intervention program was determined by reviewing their case records.

Analysis of Data

The data gathered from the measures described above were submitted to analysis to obtain descriptive data on the children and their families. Then, correlations between the independent variables and the five scores derived from the Bayley Scales -- MDI, PDI, Task Orientation, Test Affect-Extraversion, and Activity --were computed.

While many studies eliminate pre-term infants from their analyses, the three pre-term, low birth weight infants in the sample were included to gain the widest representation of children in the pilot study and to see the effects of early intervention on these potentially more at-risk children. To make the testing-level age appropriate, the Bayley MDI and PDI scores were adjusted for the pre-term infants using the due date rather than the birth date in calculating age at testing, a



practice recommended to this research team by Gail Ross, Ph.D., Department of Pediatrics and Psychiatry, The New York Hospital-Cornell Medical Center.

FINDINGS

The Children's Development

At the time of testing, the mean age of the children was thirteen months. The average Mental Development Index (MDI) score was 107.8 and the average Psychomotor Development Index (PDI) score was 107.6, where the standardized national mean is 100. (These scores, as discussed earlier, include three that have been adjusted for the child's prematurity. Without the adjustment, the mean MDI score was 103.7 and the mean PDI was 104.4).

Demographic Factors

All of the study mothers had used either crack or cocaine during their pregnancy with the study child; two reported using opiates at some time previous to this pregnancy. Ten of the 23 women had been in prior drug treatment programs. Four had been arrested at some time in the past. Eighteen of the women were African-American, four were Hispanic and one was White. The mean age of the women was 30.5 years; mean maternal education was 12 years (For all variable descriptives, see Table 2). All were eligible for public assistance and medicaid.

None of these demographic variables were correlated with the child's Bayley scores, except the mother's education which was correlated positively with the children's mental development



score (For all significant correlations, see Table 3).

Child's Birth History and Neonatal Status

Eight of the study children were female; fifteen were male. The infants' mean birth weight was 97.5 ounces, with a mean gestational age of 38.5 weeks at birth. Four had some birth complications.

The first four months of the child's life was not remembered by the mothers as having been difficult. On a 4-point scale that ranged from "often" (1) to "never" (4), children were reported on average to have cried "sometimes", been fussy "rarely", been sensitive to light, touch and sound "rarely", and to have smiled "often". On average, the babies were characterized as being between "average" and "easy" on a 4-point scale that ranged from "difficult" (1) to "very easy" (4). None were said to have been "difficult."

None of these child characteristics were associated with the children's Bayley scores, except male gender which was related to. Activity.

Home Environment

From the Mother's Home Screening instrument, we learned that on average, children were taken out several times a week, had one or two books in the home, were read to somewhat less than once a week, were taken to the grocery story about once a week, and had meals with both mother and father (or father-figure) somewhat more than once a month. Mothers reported that parents should spend some time teaching children new skills. Eleven (or a



little less than half) had been spanked in the week before the interview. In addition, we learned that thirteen of the children saw the father or father-figure daily, that fourteen were cared for by other relatives (e.g. grandmother, aunt) as well as by the mother. Only four of this sample had ever been in foster care.

Analysis determined that the children were more likely to have higher scores on the Task Orientation factor of the IBR if they took more frequent trips to the grocery store, saw the father-figure more often, ate more often with both parents, and the mother reported more positive interactions. The Activity factor was associated with reports of more frequent spanking; and higher Test Affect scores with mothers' reported interest in teaching her child new skills.

The observation in the home (HOME- SF) showed that between sixty and seventy percent of the mothers hugged and conversed with (talked to and responded to) their children. Forty percent provided their child with toys. One restricted the child's activity; and none spanked the child during the interview.

All of the children's home play environments, except one, were considered by the visiting researcher to be safe (with no "potentially dangerous health or structural hazards within a toddler's or infant's range.")

There were several important correlations between these behaviors observed in the home and the child's cognitive development (MDI score). There were significant positive correlations between the MDI and the observations that the mother spoke to the child, responded verbally to the child, and provided toys or activities to the child. When all the positive



behaviors listed in the observation were summed into a new variable, Positive Observation Score, the correlation was even stronger. Two of these maternal behavior variables were also positively correlated with the children's PDI scores, responded verbally and the Positive Observation Score. A Negative Observation Score made up of the two negative behaviors (slapped or spanked and interfered with child's activities) was positively associated with the children's PDI scores, a finding which will be further discussed later. Finally, the total number of toys resembling those in the Infant School was positively correlated with the children's MDI scores.

Program Interventions

The mothers' average number of weeks enrolled in the program was 43 weeks. The mothers had brought their children to the Infant School an average of 17 times; they had had 19.5 home visits. The mothers went to an average of 24 individual counseling sessions and 20 drug discussion groups. They had seen the doctor an average of 3.8 times; the children had seen the pediatrician 1.7 times. Three subjects used medical services for other family members. In all, the mean number of service contacts was 87 per family. The mean Global Improvement Score was .4.

The children's development, as assessed on the Infant Behavior Record, was associated with the program interventions in a number of instances. The more the family had attended the Infant School, the higher the child's score on all three factors of the IER. Mother's attendance at individual counseling was



associated with higher Task Orientation scores; and her attendance at drug discussion groups with higher Test Affect scores. Her use of the medical services for herself was associated with the child's MDI. The family's total use of Center services was correlated with higher Task Orientation scores. Finally, the mother's global rating improvement was (1) associated with higher Task Orientation scores.

DISCUSSION

One often hears about the particular sensitivities of newborns who have been exposed to crack/cocaine in utero, yet the study mothers did not remember their newborns as being particularly difficult, e.g. sensitive to touch, light or sound, or crying a lot. This finding may have actually been the case for this small sample of 23 children, or it could have been an artifact of social desirability bias which made the mothers' ratings of their infants generally very positive.

In any case, our pre-study observation that most of the children were developing within normal parameters was confirmed by the results of the Bayley assessments which showed that the means of the children's developmental scores were somewhat above average both on the Mental Development Index and the Psychomotor Development Index. Furthermore, the three pre-term, low birth weight babies were found to be making progress and were "catching up" to their full-term peers.

There are several possible explanations for this finding.

First, many studies have slown the correspondence between

mothers' education and their children's developmental levels



(Clarke-Stewart, 1973; Ramey et al., 1979; Barnard et al., 1985). It is clear that the educational level of the mothers in this study, with a mean of 12 years of schooling, was higher than in many other studies (e.g., Aylward et al., 1992). In our study, 52% of the mothers had a high school education or above; and their children's mean scores were 107.8 on the MDI and 107.6 on the PDI of the Bayley Scales. In Aylward's study, 37% of a sample of mothers had a high school education or above; their children's mean Bayley scores were 99.6 (MDI) and 102.7 (PDI).

A further explanation, which would be consistent with the goals of our program, is that early intervention has made a difference. All but seven of the mothers in our study joined the program and participated in the Infant School before the children were six months of age; ten of these sixteen children came to the Infant School before they were three months of age. All of these children and their mothers were also seen in the home by an outreach worker from the time of in-take in the program.

While there were no significant correlations between the children's mental and motor scores and their attendance in the Infant School, all of the IBR factors were associated with Infant School attendance. Because DiLalla (1990) has demonstrated a connection between high scores on the Task Orientation and Activity factors and higher IQ scores at age three, the potential value of the Infant School in influencing those temperamental characteristics which affect later cognitive achievement can be postulated (Paine, 1992). It is also important to note again that Task Orientation was correlated with the mothers' use of

individual counseling services and total family use of the comprehensive services.

At the Infant School and during home visits, parents were encouraged to talk with their children and to respond to them while they engaged in play activities. Indirect effects of attendance at the Infant School on the child's mental ability were suggested by the correlation between that score and the number of Infant School-type toys in the home and the level of verbal interaction between mother and child in the home.

What Are the Clinical Implications of these Findings?

Certainly, these findings are highly suggestive of the importance not only of providing early educational interventions for at-risk children and help for parents in learning about appropriate cognitive stimulation and emotional support but also of making available to the mothers (parents) themselves medical care and counseling, preferably group sessions, to help them overcome their addictions and get their lives together. It is interesting to note that one of the highest correlations between a Bayley score and a program variable was that between Task Orientation and Global Rating Improvement.

Additionally, for educators and other clinicians who are planning early intervention programs for at-risk infants and toddlers, it is interesting to look more closely at the subsets of behaviors in the factors most predictive of later IQ, Task Orientation and Activity. These factors include such behaviors as responsivity to toys, persistence, manually exploring objects, gross body mobility, and high energy. Informal observation, both



in the Infant School and outside, often reveals that some of these behaviors are especially problemmatic for mothers who are stressed by many other demands. For them, "manually exploring objects" translates into "touching everything and driving [me] crazy" while "high energy" and "gross body mobility" means the child is "hyper", with the result that these important developmental behaviors are usually verbally and sometimes physically limited. These informal observations are supported by the research findings mentioned earlier: That the Negative Observation Score was associated with higher PDI scores and the number of spankings with the Activity score. The more advanced in motor development and the more active, the more likely the child was to be restricted and/or spanked. Such restriction is appropriate when it promotes the child's safety but inappropriate when it interferes with the child's need to explore and learn. As Dilalla et al. (1990) point out: "The relation of activity level to later IQ may reflect the importance of object manipulation and tactile exploration in learning about the world...That is, it may not be the case that smart infants are more active, but rather than active infants are more involved in exploring and learning about their environment, which in turn better prepares them for acquiring new knowledge." We need to convey to parents that the behavior that they brand as "bad" and "hyper" is really destined to make their children smarter and more able to cope in later life. We need to help them appreciate their children's energy and curiosity about world.



FOOTNOTES

(1) Because the children's developmental scores were related to improvement in the mothers' overall status as well as to specific services in the Center and factors in the home, we decided to look as well at the relationship between this <u>family improvement</u> and Center services. We found that Global Rating Improvement was related significantly (p<.05) to mother's attendance at drug discussion groups (r = .45), her attendance at the Infant School (r = .36), the total number of times the family used program services (r = .41), and the mother's use of medical care for herself (r = .35)



TABLE 1
FACTOR LOADINGS FOR INFANT BEHAVIOR RECORD

IBR ITEMS		FACT	ors		
No.	Name	I	11	111	
1. 2. 3. 4. 5. 8. 11. 12. 13. 15. 20. 14. 16. 21.	Social-General Social-Examiner Social-mother Cooperativeness Fearfulness Emotional tone Object orientation Goal directedness Attention span Endurance Reactivity Manipulating Activity Sights-looking Body motion Energy	.88 .82* .83 .87* 74* .89*	.78* .91* .90* .59 .40*	.88* .47 .90*	
Perc	entage of total variance	.25.6	18.7	12.7	

^{*} Core items across ages derived by Matheny (1980). Matheny excluded items 9, 10, 28, 29, 30 and so did we in the principal components analysis followed by varimax rotation.

Note: Factor titles are: I-Test Affect/Extraversion, II-Task Orientation, III-Activity.



TABLE 2
STUDY VARIABLES: DESCRIPTIVE STATISTICS

VARIABLES	(N=23)	MEAN OR % YES	S.D.	MIN.	MAX.
Dependent 1	/ariable				
Bayley MDI Bayley PDI		107.8 107.6	12.7 13.1	85 80	150 140
Demographic	· ·	¢.			
Mother's comprison drug Ever arrest African-Americanic White	cack use treatment ced erican	73.9% 30.4% 43.5% 17.4% 78.3% 17.4%			
Mother's ac Mother's ec	ducation	30.5 12.0	4.1 1.5	21 10	40 16
Sex (Female Birth weigh Wks of gest Ob. complice of FIRST 4 M Did s/he crows s/he for Sensitive to Sensitive to Sensitive to Did s/he sm	e) nt (ozs.) cation cations MOS: 1=OFTEN cy? ussy? co touch? co light? co sound? nile?	38.5 17.4% > 4=NEVER] 2.1 3.1 3.6 3.3 3.4 1.3	20.9 2.8 .6 .8 .7 .9 1.0	46 31 1 2 2 1 1	132 40 4 4 4 4 4 2
Dif, Av, Ea	JLT > 4=VERY usy, V.E.	EASY]	.7	2	4
Go out of a Child's book Read stories Take to stories Teach skill Meals w both Talk at work Spank past See father Other caret Ever foster	nouse (1-7) oks (1-4) es (1-6) ore (4-1) ds (4-1) ck (5-1) week daily akers	5.9 2.3 3.8 1.8 1.5 4.7 1.9 47.8% 56.5% 60.9%	.9 .7 1.7 .7 .7 2.6 .9	4 1 1 1 1 1	7 3 6 3 3 6 4

TABLE 2 (CONTINUED)

STUDY VARIABLES: DESCRIPTIVE STATISTICS

VARIABLES	MEAN OR % YES	S.D.	MIN.	MAX.
Home Environment, cont				
Observed together	87.0%			
Spoke twice+	70.0%			
Responded verbally	65.0%			
Kissed or hugged	60.0%			
Slapped or spanked Restricted 4+	0.0% 5.0%			
Provided toys etc.	40.0%			
Looked at often	90.0%			
Play area safe	95.5%			
Positive Obs. Score	4.2	1.5		
Negative Obs. Score	.1	. 2		
I.S. Toys (#)	6.1	2.5		
Program Interventions				
No. of wks active	42.8	25.5	1	98
Infant School	17.1	15.3	1	50
Home Visits	19.5	18.0	0	65
Ind. counseling	24.1	20.5	1	93
Drug disc. groups	20.1	24.5	0	93
Mother medical	3.8	5.2	0	22
Child medical Family medical	1.7	3.9 1.7	0	19
Total medical	.5 6.0	8.2	0	8 32
Total services	86.7	64.4	4	257
			-	-
Global Rating		_		
Improvement	. 4	. 5	-1.1	1.1

TABLE 3

CORRELATIONS BETWEEN STUDY VARIABLES AND FIVE BAYLEY SCORES

(Only p<.05, one-tailed significance reported; *=p< .01)

STUDY VARIABLES	MDI	PDI	Task Te Orien A				
Demographic	Demographic						
Mother Education	. 47						
Child's Status							
Gender (Male)					.38		
Home Environment							
Child ate with both par. Ch. to grocery store Ch. saw father-fig.daily Mo. interest in teach. ch. No. of spankings Total positive home score			.52* .45 .44	36	. 42		
Mother spoke to child "respond verbally "provide toys Total positive obs. Mother restricted child Total negative obs. I.S. Toys in home	.39	.51 .39 .48 .48	. 30				
Program Interventions							
Total Infant Sch. Indiv. Counseling Drug Disc. Groups Mother Medical Total Use Global Rating Improvement	.36		.36	39 36	.37		

[#] This correlation for attendance when the child was 6-12 months.



REFERENCES

- Alyward, G.P. The Relationship between Environmental Risk and Developmental Outcome. <u>Developmental and Behavioral</u> Pediatrics, vol.13, no. 3, 1992.
- Alyward, E.H., Butz, A.M., Hutton, N., Joyner, M.L., & Vogelhut, J.W. Cognitive and Motor Development in Infants at Risk for Human Immunodeficiency Virus. American Journal of Diseases of Shildren, vol. 146, February, 1992.
- Baker, P.C. and Mott, F.L. <u>NLSY Child Handbook.</u> Center for Human Resource Research, Ohio State University, Columbus, Ohio, 1989.
- Barnard, K.E., Hammond, M., Mitchell, S.K., Booth, C.L., Spietz, A., Snyder, C., & Elsas, T. Caring for High-Risk Infants and their Families. In M. Green (ed.), The Psychological Aspects of the Family. Lexington, MA.: Lexington Books, 1985.
- Bayley, N. <u>Manual for the Bayley Scales of Infant Development.</u>
 Institute of Human Development, University of
 California, Berkeley, 1969.
- Bellisimo, Y. Crack Babies: The Schools' New High-Risk Students.

 Thrust, January, 1990.
- Blakeslee, S. Crack's Toll Among Babies: A Joyless View, Even of Toys. New York Times, September 17, 1989.
- Blakeslee, S. Child-Rearing is Stormy when Drugs Cloud Birth.

 New York Times, May 19, 1990.
- Boehm, A.E. Review of Home Observation for Measurement of the Environment. In J. Mitchell Jr. (Ed.), <u>The Ninth Mental Measurement Yearbook</u>, 663-665. Lincoln, Nebraska: University of Nebraska Press, 1985.
- Caldwell, B.M. and Bradley, R.H. <u>Home Observation for Measurement of the Environment.</u> University of Arkansas, Little Rock, Arkansas, 1984.
- Chasnoff, I. Perinatal Effects of Cocaine. Contemporary Ob/Gyn. May, 1987.
- Chasnoff, I., Burns, K., and Burns, W. Cocaine Use in Pregnancy:
 Perinatal Morbidity and Mortality. Neurotoxicology and
 Teratology, vol. 80, No. 6, December, 1987.
- Chasnoff, I., Griffith, D.R., Freier, C. & Murray, J. Cocaine/polydrug Use in Pregnancy: Two-Year Follow-up. Pediatrics, 89(2), 1992.



- Chira, S. Crack Babies Turn 5, and Schools Brace. New York Times, May 25, 1990.
- Clarke-Stewart, K.A. Interactions between Mothers and their Young Children: Characteristics and Consequences. Monograph of the Society for Research in Child Development, vol. 38, (6-7), Serial # 153, 1973.
- DiLalla, L.F., Plomin, R., Fagan, J.F., Thompson, L.A., Phillips, K., Haith, M.M., Cypers, L.H., and Fulker, D.W. Infant Predictors of Preschool and Adult IQ: A Study of Infant Twins and their Parents. <u>Developmental Psychology</u>, vol. 26, no.5, 1990.
- Hawley, T.L. & Disney, E.R. Crack's Children: The Consequences of Maternal Cocaine Abuse. Social Policy Report, 6 (4), Winter, 1992.
- Howard, J., Beckwith, L., Rodning, C., & Kropenske, V. The Development of Young Children of Substance-Abusing Parents: Insights from Seven Years of Intervention and Research, Zero to Three, vol.9, No.5, June, 1989.
- Matheny, A.P., Jr. Bayley's Infant Behavior Record: Behavioral Components and Twin Analysis. Child Development, 51,1980.
- Mayes, L.C., Granger, R.H., Bornstein, M.H. & Zuckerman, B. The Problem of Prenatal Exposure: A Rush to Judgment. <u>Journal of the American Medical Association</u>, 267(3), 1992.
- Morrison, D. Issues in Assessing the Intelligence of Prenatally Drug Exposed Infants. Newsletter of the Clearinghouse for Drug Exposed Children, vol. 3, no. 2, 1992.
- Neuspiel, D.R. & Hamel, S.C. Cocaine and Infant Behavior.

 <u>Journal of Developmental and Behavioral Pediatrics, 12</u>
 (1), 1991.
- Paine, Constance. Children Exposed to Cocaine in Utero: Does Early Intervention Help? Unpublished master's thesis: New York University, 1992.
- Ramey, C.T., Farran, D.C., & Campbell, F.A. Predicting IQ from Mother-Infant Interactions. Child Development, vol. 50, 804-814, 1979.
- Richardson, G.A. & Day, N.L. Maternal and Neonatal Effects of Moderate Cocaine Use during Pregnancy. Neurotoxicolocy and Teratology, 13, 1991.
- Rist, M. The Shadow Children. The American School Board Journal, January, 1990.

- Roszkowski, M.J. Review of the Bayley Scales of Infant Development. In J.C. Conoley & J.J. Kramer (Eds.), <u>The Tenth Mental Measurements</u> <u>Yearbook</u> (pp. 72-82). Lincoln, Nebraska: University of Nebraska Press, 1989.
- Sameroff, A.J. & Chandler, M.J. Reproductive Risk and the Continuum of Caretaking Casualty. In F.D. Horowitz (ed.), Review of Child Development Research, vol. 4, 187-244. Chicago: University of Chicago Press, 1975.
- van der Meulen, B.F. & Smrkovsky, M. Factor Analyses of Bayley's Infant Behavior Record: A Dutch Replication and Extension.

 British Journal' of Developmental Psychology, 3, 1985.
- Zuckerman, B. & Frank, D.A. "Crack kids": Not Broken. Pediatrics, 89(2), 1991.

			ide	-71
CCHP-ISES 1-92	MOTHER'S HOME	INTERVIEW	C	ONFIDENTIAL
MOTHER				
CHILD				(1)
CHILD		mo	Da Yr	(6-11)
1.Age(MOS) 2.8	ex-1M-2F 3.	.Birthweight	(OZS)	(12-18)
4.Weeks-of-Gestation				
[5Y]				
			~~~~~~	
6.How many times have		-	,	(22-23)
7. How many living chi	ldren do you h	ave?		(24)
8. How many of your ch	ildren are liv	ing with yo	u?	(25)
9.0f these the younge				
10.And the eldest is				
[9-10]	· 			- · · · · · · · · · · · · · · · · · · ·
11.Does anyone else t	ake care of yo	ur children	regulari	· · v?
[11Y] Who?				
12.Has this child eye				
13.[12Y] When and whe				
14.[12Y] Was that wit	h a family men	nber? 1Y-2N-	9DNA	(35)
15.Now, please think				
	-	TIMES RAREL	•	
A.Did s/he cry?	1	2 3	_	
B.Was s/he fussy?	1	3 3		0 (36)
C.Or sensitive to tr	uch? 1	2 3	<b>7</b>	0 (37)
D.Or sensitive to li	ght? 1	2 3	4	0 (38)
E.Or sensitive to so	und? 1	2 3		0 (40)
F.Did s/he smile?	1	2 3	<u>*</u>	0 (41)
6 In all	DIFFICULT AVER	RAGE EASY		iA \41/
G, In all, was s/he?	1	2 3	_	0 (42)



REMARKS:

CCHP-ISES 2-92	38. OBSERVATION	FORM		CO	NFIDE	NTIAL
MOTHER		ID ·	TTO Princip Nivila			
CHILD		Mo_	Da	Yr_	_ (2	3-28)
NOTE: THIS IS A C	ONTINUATION OF THE	HOME	SCREEN	ING	FORM	
	•		YES	NO	NA	
4.5% 50.1			120	.,,	1371	
13.Did you observe th together at any ti			i	0	9	(29)
14. (Mother/Guardian) child twice or mor	sponstaneously spo e (excluding scold	ke to ing).	· <b>1</b>	0	9	(30)
<pre>15.(Mother/Guardian)    to child's speech.</pre>	responded verbally	•	1	0	9	(31)
16 (Mothey Gungdina)						
<pre>16. (Mother/Guardian)   or hugged child at</pre>	least once.		i	٥	9	(32)
17.(Mother/Guardian) child at least onc	slapped or spanked e.		1	0	9	(33)
18.(Mother/Guardian) child's actions or	restricted child					
from exploring mor	e than three times	•	1	0	9	(34)
19.(Mother/Guardian) interesting activi	provided toys or ties for child.		1	0	Э	(35)
20.(Mother/Guardian) /could see child/	kept child in view looked at (him/her	,				
often.			1	0	9	(36)
21.Child's play envir (no potentially da	ingerous health or					
structural hazards or infant's range.		5	1	٥	9	(37)
INFANT SCHOOL CHEC		VED R	EPORTED	·	NA	
22.Rattles		2	1	0	9	(38)
23.Infant Gym		2.	i	ŏ	9	(39)
24.Small Blocks	• • • • • • • • • • • • •	2	1	0	9	(40)
25.Containers	• • • • • • • • • • •	2	1	0	9	(41)
26.Books		2 2	1	0	9	(42)
28. Puzzles		2	1 1	0	9	(43) (44)
29. Musical Activity		2	i	0	9	(45)



^{*(}e.g. falling plaster, peeling paint, rodents, glass, poisons & cleaning materials, flames & heat, frayed electrical wires).

CCHR-ISES 1-92	<u>HOME SCREENING</u>	CONFIDENTIAL
Mother	ID	(1-5)
Child		
1.ABOUT HOW OFTEN DOES YOUR HAVE A CHANCE TO GET OUT HOUSE (EITHER BY HIM/HER OR WITH AN OLDER REPORTS	7.SOME PARENTS S OF THE ING THEIR CHIL SELF WHILE OTHER PA (12) CHILDREN LEARN OWN. WHICH OF BEST DESCRIBES Parents should 1 always spend their childr 2 usually spen their childr	PEND TIME TEACH- DREN NEW SKILLS RENTS BELIEVE BEST ON THEIR THE FOLLOWING YOUR ATTITUDE? (17) time teaching en. d time teaching en.
2.ABOUT HOW MANY CHILDREN'S DOES OUR CHILD HAVE OF HE 1 None, too young 2 1 or 2 books 3 3 to 9 books 4 10 or more books	S BOOKS to learn on IS/HER OWN? 4 always allow to learn on 8.DOES YOUR CHIL FATHER FIGURE	their children their own. D SEE HIS/HER ON A DAILY BASIS?
3.HOW OFTEN DO YOU GET A CH TO READ STORIES TO YOUR H 1 Never 2 Several times 3 Several times a month	HANCE CHILD?  a year  (14)  MOTHER AND FAT  1 More than on  ek  2 Once a day  3 Several time  4 Once a wek  AKE  Y STORE?  CHILD EAT A ME  Once a mont  6 Never	NA (18) TEN DOES YOUR AL WITH BOTH HER-FIGURE? (19) ce a day s a week
2 Once a week 3 Once a month 4 Hardly ever, prefer to 5.ABOUT HOW MANY, IF ANY, SOFT OR ROLE-PLAYING TOY (LIKE A DOLL) DOES YOUR HAVE? (MAY BE SHARED WI SISTER OR BROTHER.)   !_! = Number of Toys	9.CHILDREN SEEM TION WHEN THEI BUSY, DOING HO EXAMPLE. HOW TALK TO YOUR C ARE WORKING? CHILD 1 Always talk 2 Often tlk t 3 Sometimes tl 4 Rarely talk 5 Never talk t	R PARENTS ARE USEWORK, FOR OFTEN DO YOU HILD WHILE YOU (20) to child whn wrkn child when workng k t child w workng to child wh workng o child wh workng
	10.SOMETIMES KID WELL AND SOME	TIMES THEY DON'T. TO SPANK YOUR PAST WEEK?

